



An Energy Efficiency Workshop & Exposition
Palm Springs, California

Please be courteous to our speakers



***Turn off all cell phones
and
Set pagers to vibrate***



An Energy Efficiency Workshop & Exposition
Palm Springs, California

FEMP Detailed Option A Guidelines

Mark Stetz

Nexant

mstetz@nexant.com

303-440-4343



Detailed Guidelines: What?

- Addendum to FEMP M&V Guidelines 2.2; to be incorporated into 3.0 (?)
- Serves as reference and resource for Option A compliant M&V methods.
- Provides minimum requirements for most Option A methods in Guidelines.
- Provides recommended 'best practices' for Option A methods.

June 2 -5, 2002

www.energy2002.ee.doe.gov

3



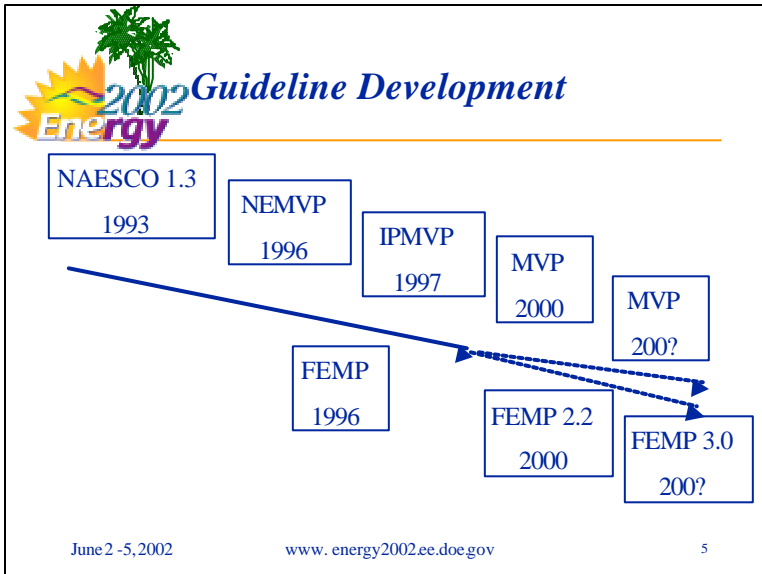
Detailed Guidelines: Why?

- 1999 report shows that Option A is most common in SuperESPC.
- Option A using 100% stipulated values very common.
- MVP 2000 now calls for '...at least one parameter to be measured'.

June 2 -5, 2002

www.energy2002.ee.doe.gov

4



2002 Energy MVP 2000 vs FEMP 2.2

- MVP Option A now called “partially measured retrofit isolation”. At least one parameter must be measured.
- M&V Goal: Minimize uncertainty in the savings estimate.
- FEMP 2.2 still allows 100% use of stipulations.
- M&V Goal: Allocate risks & responsibilities to the appropriate party.

June 2 -5, 2002 www.energy2002.ee.doe.gov 6



Current Status

- Comments and feedback from interested parties incorporated.
- Release date: Energy 2002 (June).
- Incorporates 'best practices' by ECM.
- Statistics and uncertainty discussion added.
- Available at <http://ateam.lbl.gov/mv/>

June 2 -5, 2002

www.energy2002.ee.doe.gov

7



Highlights

- Use of "stipulate" now consistent with IPMVP 2000, e.g.
 - STIPULATE = NOT MEASURED
- Guidelines deviate from MVP - allows ALL values to be stipulated in certain cases.
- Standard lighting tables accepted as measurements.

June 2 -5, 2002

www.energy2002.ee.doe.gov

8



Using the Guidelines

- The Guidelines provide
 - Appropriate use of stipulations
 - Acceptable sources of stipulations
 - Minimum M&V activities & reporting
 - Where FEMP deviates from IPMVP

June 2 -5, 2002

www.energy2002.ee.doe.gov

9



Appropriate use of Stipulations

- Agency willing to accept risk
- Agency has previous experience
- Probable success of ECM
- Small savings and/or small uncertainty
- Greater M&V costs not justified
- Stipulations don't add to uncertainty
- Monitoring serves no other purpose

June 2 -5, 2002

www.energy2002.ee.doe.gov

10



Inappropriate use of Stipulations

- Agency unwilling to assume risk
- Parameters not known with reasonable certainty
- Potential for technical problems
- Monitoring provides valuable information
- Stipulation significantly contributes to overall uncertainty

June 2 -5, 2002

[www. energy2002.ee.doe.gov](http://www.energy2002.ee.doe.gov)

11



Required Minimum M&V Activities

- Baseline definition in DES with supporting information.
- Post-installation report with first-year estimates.
- Annual M&V verification - “potential to perform.”
- Annual M&V reports.

June 2 -5, 2002

[www. energy2002.ee.doe.gov](http://www.energy2002.ee.doe.gov)

12



Summary

- Guidelines move M&V closer to IPMVP compliance while retaining flexibility.
- Guidelines provide specific recommendations for each ECM.
- Guidelines promote M&V that satisfies legal intent and enforces guarantees.